REMARKS

Please reconsider the application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering this application.

Disposition of Claims

Claims 1-6 are pending in this application. Claim 7 has been added by way of this reply. Claims 1 and 7 are independent. The remaining claims depend, directly or indirectly, from independent claim 1.

Claim Amendments

Claim 1 has been amended to clarify the present invention. Claim 7 has been added by way of this reply. Support for these amendments can be found in claims 4-6, as originally filed, and paragraphs [0060], [0061], [0076], and [0102], at least. No new matter has been added by way of these amendments.

Rejection(s) under 35 U.S.C. § 103

Claims 1 and 4-6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,062,438 issued to Micheletti ("Micheletti") in view of U.S. Patent No. 4,806,192 issued to Haas ("Haas"). Claim 4-6 were cancelled by way of this reply. Accordingly, the rejection is moot with respect to claims 4-6. However, to the extent that this rejection still applies to claim 1 as amended, the rejection is respectfully traversed. Additionally, Applicant respectfully submits that newly added claim 7 is patentable over Micheletti in view of Haas.

Claim 1, as amended, recites a resist stripping equipment that includes, *inter alia*, a plurality of resist stripping chambers and a rinse chamber supplied with water that is in communication with a last stage resist stripping chamber, wherein the substrate is supplied to the rinse chamber from the last stage resist stripping chamber. Additionally, the rinse chamber is supplied with an inert gas from an inert gas supply unit that is connected to the rinse chamber. A pressure switch monitors an inner pressure of the rinse chamber and transmits to a damper a value travel signal, where the damper is connected to a gas line of the resist stripping equipment. The present invention, in accordance with claim 1, advantageously allows for, due to the presence of water in the rinse chamber, a moisturized inert gas to flow countercurrent from the rinse chamber into the plurality of resist stripping chambers. This provides for ease in maintaining water concentration of a water-based resist stripping liquid used in the plurality of resist stripping chambers. Moreover, it allows for ease of control of the volume of inert gas introduced into the rinse chamber because the damper, which is connected to the gas line of the resist stripping equipment, is controlled based on the pressure of the rinse chamber, into which the inert gas is first introduced.

Embodiments of the present invention as recited in claims 1 and newly added 7 differ at least with respect to the placement of the inert gas supply unit and the chamber monitored by the pressure switch. Newly added independent claim 7 recites a similar resist stripping apparatus that includes, *inter alia*, a plurality of resist stripping chambers and a rinse chamber supplied with water that is in communication with a last stage resist stripping chamber, wherein the substrate is supplied to the rinse chamber from the last stage resist stripping chamber. Additionally, the last stage stripping chamber is supplied with an inert gas from an inert gas supply unit that is connected to the last stage resist stripping chamber. A pressure

switch monitors an inner pressure of the rinse chamber and transmits to a damper a value travel signal, where the damper is connected to a gas line of the resist stripping equipment. The placement of the gas supply unit in the present invention as recited in claim 7 allows for the inert gas to flow directly into the plurality of resist stripping chamber without passing through the rinse chamber that is supplied with water, making the apparatus suitable for a non-water-based resist stripping liquid. Because the inert gas avoids absorbing water moisture present in the rinse chamber, a very low water concentration in the non-water-based resist stripping liquid may be easily and advantageously maintained. Further, the incorporation of the damper and pressure switch into the resist stripping equipment, as recited in claim 7, provides for ease of control of the volume of inert gas introduced into the plurality of resist stripping chambers because the damper, which is connected to the gas line of the resist stripping equipment, is controlled based on the pressure of the last stage resist stripping chamber, into which the inert gas is introduced.

With reference to Figure 1 of Micheletti, Micheletti discloses an apparatus and process for washing flexible flat objects, such as venetian blinds. The wash apparatus includes a first solution tank 6, a first chamber 5 for a substrate, a first spray that is connected to the first solution tank 6 and sprays solution onto the substrate in the first chamber 5. A first solution line 22 may supply the sprayed solution from the first chamber 5 to the first solution tank 6. A gas line 20 supplies a mixed gas containing a solution component from the first chamber to the outside. A gas/liquid separation block 10 is connected to the gas line 20 and separates the solution component from the introduced mixed gas. A second chamber 7 is connected to the first chamber 5 and is supplied with the substrate from the first chamber 5. The substrate is sprayed with solution in the second chamber 7 by a second spray, where the second spray is connected to a second tank 8. A second solution line 23 supplies the sprayed solution from the

second chamber 7 to the second tank 8. A recovered solution line is connected to the gas/liquid separation block 10 and supplies the separated solution component to the second tank 8, via third chamber 9 and supply line 24. A rinse chamber 9 is in communication with chamber 7, where the chamber 9 is supplied with water. Gas supply unit 12 is connected to a dry chamber 11 via gas spout unit 14.

With reference to Figure 1 of Haas, Haas discloses an apparatus and method for etching a material. The etching apparatus of Haas includes a preliminary etching unit 22 and an etching machine 1. Both the preliminary etching unit 22 and the etching machine 1 include sumps 26, 6 that contain etching solution. The sump 26 of the preliminary etching unit 22 is supplied with etching solution from the sump 6 of the etching machine 1 through the overflow pipe 29.

Michelelli and Haas, whether considered separately or in combination, fail to show or suggest every limitation of claim 1. Specifically, Micheletti and Haas do not show or suggest an apparatus having a damper which is connected on the gas line, a pressure switch which monitors an inner pressure of the rinse chamber and transmits to the damper a value travel signal, and an inert gas supply unit which is connected to the rinse chamber and supplies inert gas into the rinse chamber, where the rinse chamber is supplied with water, as required by claim 1. Rather, Micheletti teaches that gas is supplied to the dry chamber 11, not rinse chamber 9. Thus the gas is supplied to a chamber that is not supplied with water. Further, both references are silent with respect to the use of a damper and pressure switch that monitors the inner pressure of a rinse chamber, and thus do not allow for the regulation of gas flow into the apparatus. Therefore, because Micheletti and Haas do not show or suggest all of the features of claim 1, independent claim 1 is patentable over Micheletti and Haas.

Micheletti and Haas, whether considered separately or in combination, also fail to show or suggest every limitation of newly added claim 7. Specifically, Micheletti and Haas do not show or suggest an apparatus having a damper which is connected on the gas line, a pressure switch which monitors an inner pressure of the resist stripping chamber of the last stage and transmits to the damper a value travel signal, and an inert gas supply unit which is connected to the resist stripping chamber of the last stage and supplies inert gas into the resist stripping chamber of the last stage. As discussed above, Micheletti teaches that gas is supplied to the dry chamber 11, not a resist stripping chamber. This structural arrangement, as taught by Micheletti, generates a gas flow that passes from the dry chamber 11, into the rinse chamber 9 that is supplied with water, and then through the first and second chambers 5, 7 as a moisturized gas. Further, both Micheletti and Haas are silent with respect to the use of a damper and pressure switch that monitors the inner pressure of the last stage resist stripping chamber, and thus do not allow for the regulation of gas flow into the apparatus. Therefore, because Micheletti and Haas do not show or suggest all of the features of claim 7, independent claim 7 is patentable over Micheletti and Haas.

In view of the above, Micheletti and Haas, whether considered separately or in combination, fail to show or suggest the present invention as recited in independent claims 1 and 7. Thus, claims 1 and 7 are patentable over Micheletti and Haas. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 2-3 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Micheletti in view of Haas, as applied to claim 1, and further in view of U.S. Patent No. 5,762,749 issued to Suzuki, et al. ("Suzuki"). Claim 1 has been amended in this reply to clarify

the present invention. To the extent that this rejection still applied to the claims as amended, the rejection is respectfully traversed.

As discussed above with respect to amended claim 1, from which claims 2-3 depend, Micheletti and Haas, whether separately or in combination, neither show or suggest an apparatus having a damper which is connected on the gas line, a pressure switch which monitors an inner pressure of the rinse chamber and transmits to the damper a value travel signal, and an inert gas supply unit which is connected to the rinse chamber and supplies inert gas into the rinse chamber, where the rinse chamber is supplied with water, as required by claim 1. Suzuki, which the Examiner asserts as teaching gas spout units in a processing chamber facing the substrate, does not provide what Micheletti and Haas lack, with respect to amended independent claim 1.

As discussed above with respect to newly added claim 7, Micheletti and Haas, whether separately or in combination, neither show or suggest an apparatus having a damper which is connected on the gas line, a pressure switch which monitors an inner pressure of the last stage resist stripping chamber and transmits to the damper a value travel signal, and an inert gas supply unit which is connected to the last stage resist stripping chamber and supplies inert gas into the last stage resist stripping chamber, as requested by claim 7. Suzuki does not provide what Micheletti and Haas lack, with respect to claim 7.

In view of the above, Micheletti, Haas, and Suzuki, whether considered separately or in combination, fail to show or suggest the present invention as recited in independent claims 1 and 7. Thus, claims 1 and 7 are patentable over Micheletti, Haas, and Suzuki. Claims 2-3, which depend from claim 1, are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 07200/032001).

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Respectfully submitted,

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